

Attorney Docket: 25090A

IN THE CLAIMS

Please amend the claims, without prejudice or disclaimer, as set forth below.

Also, add new claims 27-33 as presented below.

1. (currently amended) A glass-melting furnace comprising:
an upstream end, a downstream end, and a roof, the upstream end being positioned upstream of the downstream end;
a charger to supply glass-forming material to the upstream end of the furnace;
at least one burner to supply heat to the glass-forming material at the upstream end of the furnace; and
an exhaust positioned at the downstream end of the furnace and in communication with the downstream end of the furnace so that combustion gases in the furnace are exhausted only from the exhaust at the downstream end of the furnace,
the exhaust further being positioned downstream of the at least one burner.

2. (original) The glass-melting furnace of claim 1 in which the at least one burner is mounted through the roof of the furnace.

3. (original) The glass-melting furnace of claim 1 in which the at least one burner is a plurality of burners.

4. (original) The glass-melting furnace of claim 3 in which more than 50 percent of the burners are positioned upstream of the exhaust.

5. (original) The glass-melting furnace of claim 4 in which all of the burners are positioned upstream of the exhaust.

6. (original) The glass-melting furnace of claim 1 in which the exhaust is an exhaust stack.

Attorney Docket: 25090A

7. (original) The glass-melting furnace of claim 1 in which the exhaust is a plurality of exhaust stacks.

8. (original) The glass-melting furnace of claim 1 in which the exhaust is disposed at a discharge end wall of the furnace.

9. (original) The glass-melting furnace of claim 1 in which the exhaust is disposed at a sidewall of the furnace.

10. (original) The glass-melting furnace of claim 1 in which the at least one burner is a plurality of burners mounted through the roof of the furnace, all of the burners are positioned upstream of the exhaust outlets, and the exhaust comprises at least two exhaust outlets.

11. (original) The glass-melting furnace of claim 10 in which the exhaust outlets are a plurality of exhaust stacks.

12. (currently amended) A glass-melting furnace comprising:
an upstream end having a charge end wall and a downstream end having a discharge end wall, the upstream end being positioned upstream of the downstream end;
an exhaust in communication with the furnace, the exhaust having a centerline that is positioned at least about 70 percent of the distance from the charge end wall of the furnace to the discharge end wall of the furnace so that combustion gases in the furnace are exhausted only from the exhaust having its centerline positioned at least about 70 percent of the distance from the charge end wall of the furnace to the discharge end wall of the furnace.

Attorney Docket: 25090A

13. (original) The glass-melting furnace of claim 11 in which the exhaust centerline is positioned at least about 80 percent of the distance from the charge end wall of the furnace to the discharge end wall of the furnace.

14. (original) The glass-melting furnace of claim 12 wherein the furnace comprises two sidewalls and two exhausts, each exhaust being separated laterally from the sidewalls.

15. (currently amended) In a glass-melting furnace having an upstream end with a charge end wall and a downstream end with a discharge end wall, the upstream end being positioned upstream of the downstream end, the improvement comprising: an exhaust in communication with the furnace at the downstream end of the furnace so that combustion gases in the furnace are exhausted only from the exhaust in communication with the furnace at the downstream end.

16. (original) The glass-melting furnace of claim 15 wherein the exhaust is disposed at the discharge end wall.

17. (original) The glass-melting furnace of claim 15 wherein the exhaust comprises an exhaust stack.

18. (original) The glass-melting furnace of claim 15 wherein the exhaust comprises a plurality of exhaust stacks.

19-26. (cancelled)

Attorney Docket: 25090A

27. (new) A glass-melting furnace comprising:
an upstream end and a downstream end;
a charger to supply glass-forming material to the upstream end of the furnace;
and
at least one exhaust at the downstream end of the furnace, wherein combustion
gases in the furnace are exhausted only from the at least one exhaust.

28. (new) The glass-melting furnace of claim 27 in which the at least one
exhaust has a centerline that is positioned at least about 70 percent of the distance
from the upstream end to the downstream end of the furnace.

29. (new) A glass-melting furnace comprising:
an upstream end and a downstream end;
a charger to supply glass-forming material to the upstream end of the furnace;
at least one burner to supply heat to the glass-forming material at the upstream
end of the furnace; and
one or more exhausts positioned only at the downstream end of the furnace and
in communication with the downstream end of the furnace so that combustion gases in
the furnace are exhausted only from the downstream end of the furnace.

30. (new) The glass-melting furnace of claim 29 in which the one or more
exhausts have centerlines that are positioned at least about 70 percent of the distance
from the upstream end to the downstream end of the furnace.

Attorney Docket: 25090A

31. (new) A glass-melting furnace comprising:
a first half and a second half;
a charger to supply glass-forming material to a charge end of the first half of the furnace;
at least one burner to supply heat to the glass-forming material in the first half of the furnace; and
at least one exhaust positioned at the second half of the furnace and in communication with the second half of the furnace with no exhaust positioned at the first half of the furnace so that combustion gases in the furnace are exhausted only from the second half of the furnace.

32. (new) The glass-melting furnace of claim 31 further comprising a charge end and a discharge end, the at least one exhaust having a centerline that is positioned at least about 70 percent of the distance from the upstream end to the downstream end of the furnace.

33. (new) The glass-melting furnace of claim 31 in which there is a pressure differential between the first half of the furnace and the second half of the furnace, wherein pressure in the second half of the furnace is lower than pressure in the first half of the furnace.